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10/550,056	03/22/2007	Kwang Suck Suh	SUHK3001/REF	5781

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EXAMINER

PHAN, THIEM D

ART UNIT	PAPER NUMBER
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3729

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,056	Applicant(s) SUH ET AL.	
	Examiner THIEM PHAN	Art Unit 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed on 11/05/08 has been fully considered and made of record.
2. Applicants' Amendment (filed 11/05/08) has added new embodiments, which then necessitates new grounds of Restriction presented in this Office action.

Restriction to one of the following inventions is required under 35 U. S. C. 121:

- I. Claims 1-13 and 16-21 drawn to a method of providing a desired range of point-to-ground resistance to trays, classified in class 29, subclass 610.1;
 - II. Claim 15, drawn to a tray, classified in class 206, subclass 719.
3. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the process as claimed can be used to make other and materially different product, such as forming a conductive polymer sheet.
 4. Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

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(a) the inventions have acquired a separate status in the art in view of their different classification;

(b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

(c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);

(d) the prior art applicable to one invention would not likely be applicable to another invention;

(e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicants are advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144.

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If claims are added after the election, applicants must indicate which of these claims are readable upon the elected invention.

Should applicants traverse on the ground that the inventions are not patentably distinct, applicants should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicants are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. Since applicants have received an action on the merits for the originally presented or claimed invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 6 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Applicants are required to cancel the nonelected claim 15 or take other appropriate action.

An Office Action on the merits of Claims 1-13 and 16-21 now follows.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 21 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Applicants are requested to specifically delineate what is included and excluded by the term "... is formed by two or more methods ..." and the like language. Throughout the specification, applicants have failed to specifically define them.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. The claimed language "...is formed by two or more methods ..." is confusing and unclear because the specification and the drawings do not disclose these two or more requirements and it is confused why it is necessary to apply at least two of these required methods to form the conductive pathway. This language not only is held to be vague and

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indefinite, the metes and bounds or scope of the claimed subject matter cannot be determined in the disclosure.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1, 2, 12 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (US 6,780,490) in view of Comiskey et al (US 6,473,072).

Regarding claim 1, Hanaoka et al teach a process of fabricating a tray for electronics device, comprising:

- forming a conductive sheet (Fig. 1, 1) made of thermoplastic resin including polymeric antistatic (Col. 6, lines 21-29) and conductive coated carbon (Col. 7, lines 7-9), except for having a polymer film coated with conductive material;
- forming a tray (Fig. 2a, 1) having cut surfaces (Fig. 2a, areas marked with width of 10, 12 or 15 mm) with the conductive sheet; and
- forming a conductive pathway on all or parts of the cut surfaces of the tray, due to conductive material (Col. 6, lines 24-26; col. 10, lines 2-4).

Comiskey et al teach a display media (Fig. 1a, 16) with rear electrode or conductive sheet (14) mounted in a container (12) where the rear electrode is made of polymer film coated with

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conductive material (Col. 13, lines 50-51), in order to obtain a conductive pattern as desired (Col. 3, lines 3 & 4).

It would be obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Hanaoka et al by applying the conductive sheet, as taught by Comiskey et al, in order to obtain a desired pattern of conductive sheet, based on the polymer sheet.

Regarding claim 2, Hanaoka et al in view of Comiskey et al teach that the conductive pathway is formed by coating a conductive solution to the cut surfaces of the tray having insulative properties (of Comiskey et al; Col. 13, lines 50-51).

Regarding claim 12, Hanaoka et al in view of Comiskey et al teach that the conductive pathway is formed by using an antistatic polymer (Col. 6, lines 21-29).

Regarding claims 16-20, Hanaoka et al in view of Comiskey et al teach the claimed invention; except for describing the composition of the material.

Notation: The claimed limitation “wherein the conductive solution ...; wherein the conductive polymer is ...; wherein the derivative of the conductive polymer ...; wherein the metal oxide comprises ...; wherein the surfactant comprises ...” (Claims 16-20) is considered to be of Composition Claims but this claimed invention is about the Method Claims wherein the process of grounding the trays operates and does not depend on the composition limitation for completeness but, instead, the process steps or limitations are able to stand alone so this manner of operation does not distinguish over the process of Hanaoka et al in view of Comiskey et al, and Hanaoka et al in view of Comiskey et al a minimum suggests the claimed method invention.

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12. Claims 2 (being further rejected), 3-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al in view of Comiskey et al and further view of Applicants' Admitted Prior Art, hereinafter AAPA.

Regarding claims 2 and 13, Hanaoka et al in view of Comiskey et al teach a process of fabricating a tray for electronics device, which reads on applicants' claimed invention; except for forming a conductive pathway as a coating of conductive solution or an antistatic and conductive tape at the cut surfaces of the tray.

AAPA teaches a method of making tray by coating an antistatic layer on any surface, cut or noncut, of the polymeric tray (Page 2, lines 24 & 25).

It would be obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Hanaoka et al in view of Comiskey et al, by applying a coating of conductive and antistatic layer to any cut surfaces, as taught by AAPA, in order to increase the conductivity and antistatic characteristics of its surfaces because the tray composition, already made of conductive antistatic material, will help increasing the grounding process of these coating surfaces.

Regarding claim 3, Hanaoka et al teach the molding techniques (Col. 10, lines 1-23) of the tray. It would be obvious to one of ordinary skill in the art at the time the invention was made to perform a heat curing at the thermoplastic with the polymeric and coated conductive solution or mixture.

Regarding claim 4, Hanaoka et al teach that the conductive solution or mixture comprises 15 to 60 parts by weight per 100 of the thermoplastic (Col. 8, lines 4 & 5), the

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conductive material being selected from the group consisting of a conductive polymer, conductive carbon, a metal, and mixtures thereof (Col. 7, lines 1-13).

Regarding claims 5 and 6, Hanaoka et al teach that the conductive polymer is selected from the group of polymer derivatives or the like and mixtures thereof (Col. 6, lines 37-46).

Regarding claim 7, Hanaoka et al teach that the conductive carbon comprises carbon fibers or conductive carbon black (Col. 7, lines 48 and 56).

Regarding claim 8, Hanaoka et al teach that the metal comprises copper (Col. 7, line 5).

Regarding claim 9, Hanaoka et al teach that the metal oxide comprises doped indium oxide or tin oxide (Col. 6, line 61).

Regarding claim 10, Hanaoka et al teach a process of fabricating a tray for electronics device, which reads on applicants' invention; except for using a variety of surfactants.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to use a variety of surfactants as antistatic conductive layer for the tray because applicants have not disclosed that using a variety of surfactants as antistatic conductive layer for the tray provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicants' invention to perform equally well with a complete mixture of polymeric and conductive antistatic material (Fig. 1, 1) forming the tray shell as well and applicants further specify that the surfactants (Specification; Page 6, line 4) or carbon black, as taught by Hanaoka et al, can be both applied in the claimed invention. Therefore, it would have been an obvious matter of design choice to modify Hanaoka et al to obtain the invention as specified in Claim 10.

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Regarding claim 11, Hanaoka et al teach a process of fabricating a tray for electronics device, including the molding into a tray sheet (Fig. 1, 1; col. 10, lines 1-24) a material made of thermoplastic resin composing of polymeric antistatic (Col. 6, lines 21-29) and conductive coated carbon (Col. 7, lines 7-9).

It would be obvious to one of ordinary skill in the art at the time the invention was made to have the thickness of the conductive layer with a range of a few nanometers to the thickness of the tray, due to the conductive material in the mixture.

Response to Arguments

13. Applicants' arguments with respect to claims 1-13 and 15 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Applicants' amendment necessitated the new ground of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Phan whose telephone number is 571-272-4568. The examiner can normally be reached on M & Tu, 6AM - 2PM, and W & Th, 9AM – 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on 571-272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/A. Dexter Tugbang/
Primary Examiner
Art Unit 3729

/Phan Thiem/
Examiner, Art Unit 3729

January 20, 2009